



ASTM B-390

Standard Practice for Evaluating Apparent Grain Size and Distribution of Cemented Tungsten Carbides

This practice for the visual comparison and classification of the apparent grain size and distribution of cemented tungsten carbides is limited to cemented tungsten carbides that contain approximately 6, 10, and 18% cobalt. For reference, the apparent grain size is the average diameter of the tungsten carbide particle as measured on an etch metallographically polished surface of a specimen of sintered cemented carbide. It is expressed in micrometers and is generally reported as a range.

The apparent size and distribution of tungsten carbide grains in cemented carbides affects the material's wear resistance and fracture. For a given chemical composition, an increase in the average grain size will result in increased toughness and decreased wear resistance. This practice illustrates representative microstructures for a wide range of tungsten carbide-cobalt grades. This is not intended to be used as a specification for carbide grades; producers and users may use the micrographs and grain size chart as a guide in developing their own specifications.

If you have any questions concerning this particular ASTM method, please feel free to give our office a call at (800) 334-5432 or email us your inquiry at info@nhml.com.

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